

4 - Landcover and Uses

This section examines the land usage patterns in the National Grasslands areas. The analysis looks at land coverage data on various spatial scales, including counties within 60 miles of each of the grassland districts, within the forest unit boundaries, and on FS land parcels. This provides an extensive examination of the effects of FS land management policies on land coverage, both on regional scale and on a more local scale where contrasts between public and private land use is most evident.

Data for this section is obtained from the United States Geological Survey National Land Coverage Data set (NLCD) a raster based Landsat imagery.¹ The data is obtained for each state with a 30-meter resolution making the analysis fairly accurate. The Arc Info Geographic Information Systems software is used to interpret and extract the necessary data for each contextual geographic area.²

The Kiowa-Rita Blanca and Black Kettle National Grasslands have distinct geological and climatic features. The former lies within the Llano Estacado geological region of the high southern plains, which is characterized by dark and reddish-brown neutral sandy loam and clay loam soils, low rainfall, moderate temperatures and frequently strong winds.³ The native vegetation of the region is complex climax grassland of blue grama, hairy grama and secondary buffalo grasses. The Black Kettle, by contrast, lies along the lower eastern plains, atop the gas-rich Anadarko Basin.

4.1 Land Cover on the National Grasslands

Table 4.1 offers a classification of land cover in the National Grasslands and the surrounding region based on imagery compiled in the NLCD. The data is displayed in Figure 4.1. As this data indicates, herbaceous grasslands are the dominant land cover in the broader region, accounting for 54%; row crops and small grain agriculture occupy an additional 24%; and shrubland and evergreen forests comprise most of the remainder.⁴ Combined urbanized uses, including residential, commercial, transportation and developed recreational, comprise less than 1% throughout the overall region.

¹ Ground surveyed land use data is unavailable for the study region. Remotely sensed Landsat data offers the best alternative. The NLCD discriminates among 21 categories of land cover, but there are limitations in the use of the data for the present study that should be noted. Most importantly, NLCD does not offer subcategories of herbaceous grasslands, which is the predominant land cover in the study region. It is not possible to differentiate among the various qualities of herbaceous grasslands, for instance to provide a measure of forage density. Likewise, it is not possible to use NLCD to measure the impact of the intensity of grazing on herbaceous grassland, limiting the capacity to account for the potentially significant differences in the impact of grazing on grassland sustainability. Further, measurable errors exist in the identification of land cover. This likely explains the presence of developed agricultural use on FS-managed land in both Grassland districts. Finally, it should be noted that the category 'fallow' refers exclusively to unused cropland; and 'pasture/hay' refers to more densely vegetated grass cover than is typically found in the study region.

² Calculations for areas of each land use type are done as follows. Each cell is coded with a particular land use type. Counts of each cell type for the geographic area of interest are calculated and extracted from the Landsat imagery using the ESRI ArcGIS software and put into Excel. Since the resolution is 30meter, each count is for a 900 square meter area. We then multiply each count by 900 to get the area. Because the imagery does not have smaller resolution, the 30-meter resolution may slightly over or under count the areas towards the edges.

³ Brooks and Emel, 2000

⁴ United States Geological Survey, National Land Cover Dataset: <http://landcover.usgs.gov/natl/landcover.asp>

Within the boundaries of the National Grasslands, the predominance of herbaceous grasslands is more pronounced than across the region as a whole. Herbaceous grasslands cover 807,935 acres, or 71.9% of the total land area within the Grasslands boundaries, including both public and private land. Row crops, small grain agriculture and, to a lesser degree, shrubland are also found within the Grassland boundaries, though they are somewhat less common than found across the larger region. Grass covers a greater share of the larger Kiowa-Rita Blanca National Grassland, as do row crops and small grain agriculture, particularly in Dallam County, Texas. Because of its smaller scale, developed agriculture is less common in the Black Kettle; instead, more of the land is given over to shrubland.

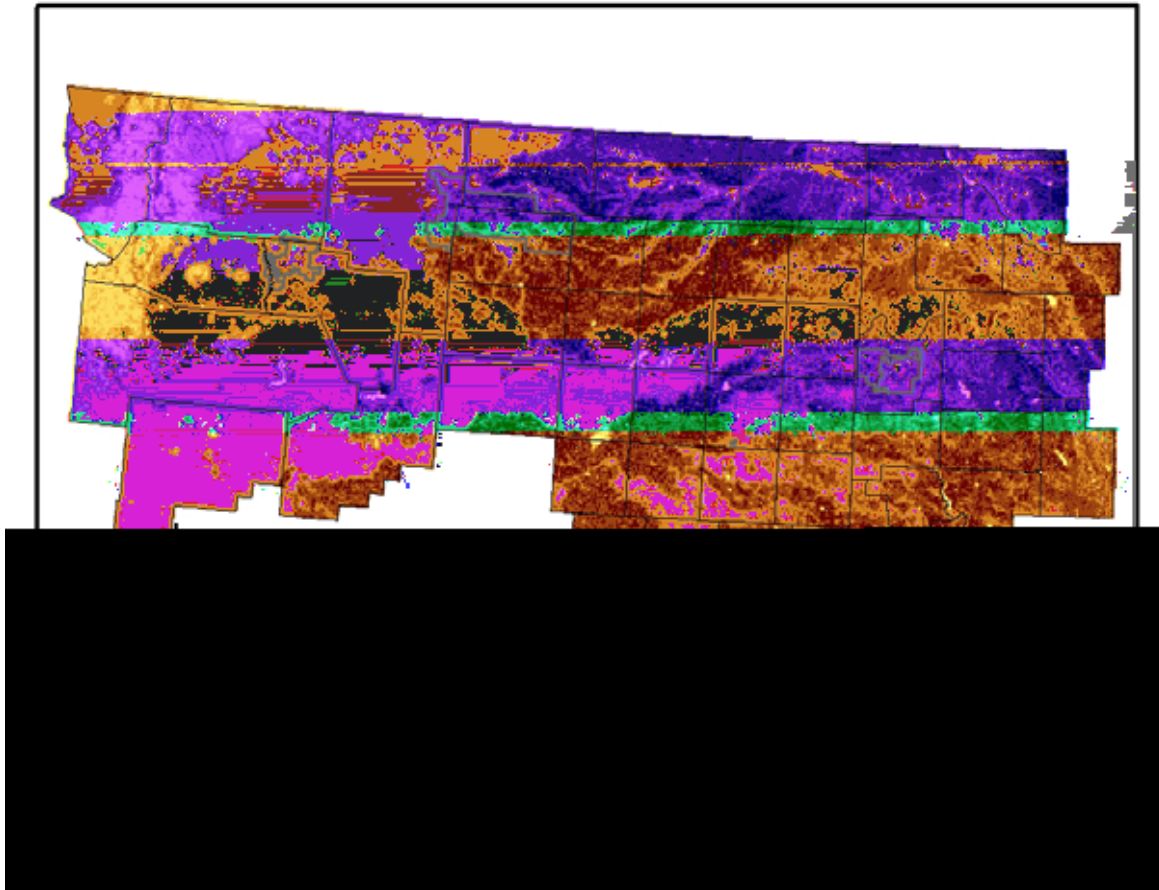


Figure 4.1: Land Cover in the Grasslands Region

Table 4.1: Land Cover in the Grasslands Region¹

	(Acres)			
	Region	Kiowa-Rita Blanca NG	Black Kettle NG	TOTAL CNG
Open Water	191,905	51	1,430	1,481
Low Intensity Residential	78,649	101	366	467
High Intensity Residential	15,075	-	60	60
Commercial/Industrial/Transportation	63,270	309	130	439
Urban/Recreational/Grasses	3,616	3	-	3
Bare Rock/Sand/Clay	160,001	591	567	1,158
Quarries/Strip Mines/Gravel Pits	11,716	33	-	33
Transitional	5,198	-	-	-
Deciduous Forest	213,711	112	240	352
Evergreen Forest	2,731,108	4,352	1,204	5,557
Mixed Forest	65,607	-	904	904
Shrubland	5,187,494	19,926	50,627	70,553
Grasslands Herbaceous	23,942,077	646,549	161,386	807,935
Pasture/Hay	914,512	15,482	3,123	18,605
Row Crops	4,839,505	91,409	14,492	105,900
Small Grains	5,700,441	95,086	10,961	106,047
Fallow	80,674	4,453	-	4,453
Woody Wetlands	2,752	-	76	76
Emergent Herbaceous Wetlands	31,218	-	44	44
Total	44,238,529	878,455	245,609	1,124,064

Notes: 1) The region geography includes all counties with boundaries within 60 miles of Grasslands boundaries. A complete list of these boundaries is included in TABLE XX of the Appendix. 2) Small errors in calculations are the result of 'edge rounding' associated with the use RASTER based NLCD.

Source: USGS EROS, National Land Cover Data (NLCD), Dates 09/10/2000 (New Mexico), 09/14/2000 (Oklahoma), 09/26/2000 (Texas). Calculations by UNM-BBER.

Figures 4.2 and 4.3 show land cover within the Grassland boundaries and for FS-owned units for the Kiowa-Rita Blanca and Black Kettle-McClellan Creek Grassland Districts, respectively. Table 4.2 summarizes the land cover of FS and privately-owned lands within boundaries of the two districts of the National Grasslands. The most significant pattern is that FS-owned land is more strongly characterized by the predominance of native cover in both districts. On the Kiowa-Rita Blanca, herbaceous grasslands cover nearly 93% of the publicly owned land, whereas on private land grasses cover just under 67%. Much of the balance of private land is given over to developed agricultural uses, including row crops and small grain cultivation; two-thirds of private land in developed agriculture on the Kiowa-Rita Blanca is in Dallam County, Texas.

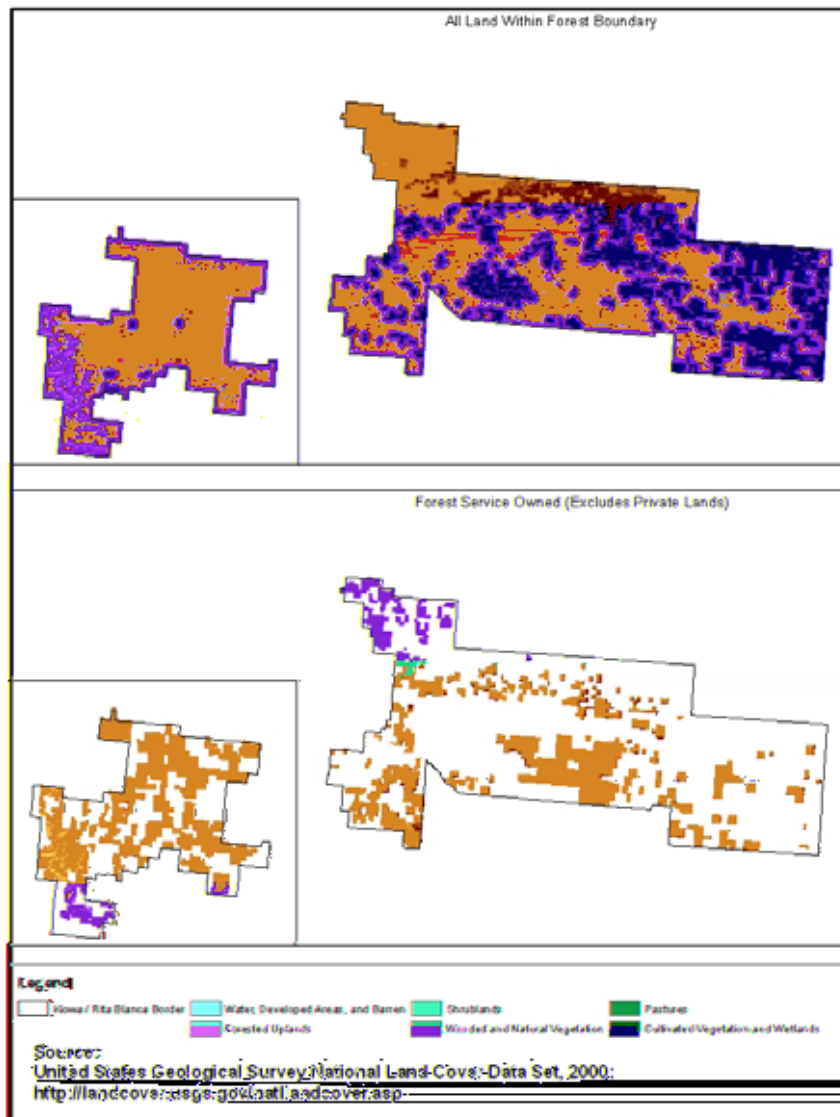


Figure 4.2: Land Cover on Kiowa-Rita Blanca National Grasslands

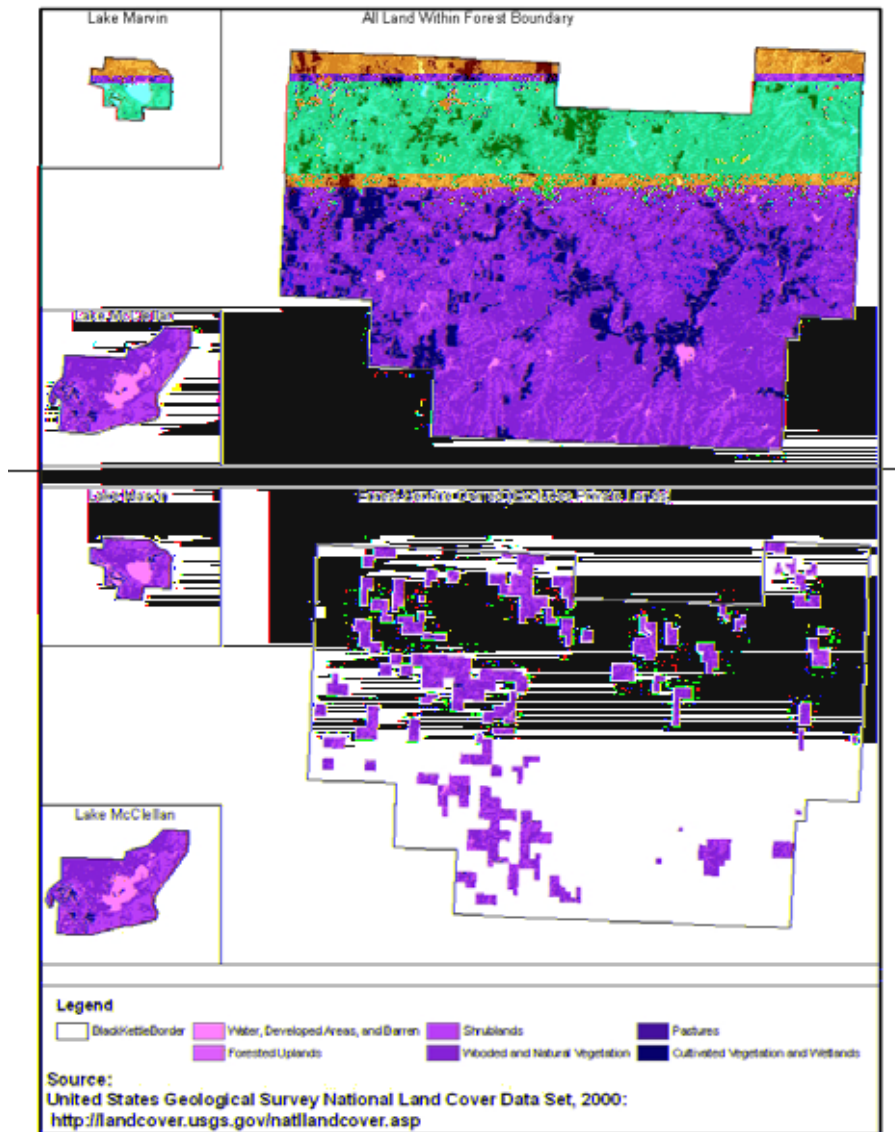


Figure 4.3: Land Cover on Black Kettle National Grasslands

Table 4.2: Land Cover of Publicly And Privately Owned Land in the National Grasslands

	(Acres)								
	Kiowa-Rita Blanca NG			Black Kettle-Lake McClellan NG			Cibola NGs TOTAL		
	NFS	Private	Total	NFS	Private	Total	NFS	Private	Total
Open Water	16	35	51	397	1,032	1,430	413	1,067	1,481
Low Intensity Residential	-	101	101	-	366	366	-	467	467
High Intensity Residential	-	-	-	-	60	60	-	60	60
Commercial/Industrial/Transportation	17	292	309	6	124	130	23	416	439
Urban/Recreational/Grasses	-	3	3	-	-	-	-	3	3
Bare Rock/Sand/Clay	17	574	591	47	520	567	64	1,094	1,158
Quarries/Strip Mines/Gravel Pits	-	33	33	-	-	-	-	33	33
Deciduous Forest	-	112	112	62	178	240	62	290	352
Evergreen Forest	2,457	1,895	4,352	299	906	1,204	2,756	2,801	5,556
Mixed Forest	-	-	-	233	671	904	233	671	904
Shrubland	9,873	10,053	19,926	12,293	38,333	50,626	22,165	48,386	70,551
Grasslands Herbaceous	215,661	430,874	646,535	18,862	142,520	161,382	234,523	573,394	807,917
Pasture/Hay	338	15,143	15,482	46	3,077	3,123	385	18,220	18,604
Row Crops	2,097	89,310	91,407	80	14,412	14,492	2,176	103,722	105,898
Small Grains	1,630	93,453	95,084	146	10,815	10,961	1,776	104,268	106,044
Fallow	201	4,251	4,452	-	-	-	201	4,251	4,452
Woody Wetlands	-	-	-	28	-	28	28	-	28
Emergent Herbaceous Wetlands	-	-	-	44	75	119	44	75	119
Total	232,308	646,128	878,436	32,543	213,089	245,632	264,850	859,218	1,124,068

Note: Small errors in calculations are the result of 'edge rounding' associated with the use RASTER based NLCD.

Source: USGS EROS, National Land Cover Data (NLCD), Dates 09/10/2000 (New Mexico), 09/14/2000 (Oklahoma), 09/26/2000 (Texas). Calculations by UNM-BBER.

On the Black Kettle, the principal difference in land cover between -managed and privately-managed land is the relative abundance of shrubland on the FS land – 37.8% of FS land compared to 18% of private land. As the data show, private lands in Black Kettle have a greater share of the land covered with economically valuable herbaceous grasslands and developed agriculture, including pasture, row crops and small grains.

Table 4.3 presents the data in a way that brings to the surface the role of public and private land managers in promoting particular land uses. The values are an index of the share of a given land coverage under federal and private ownership, weighed for the overall distribution of land ownership within the Grassland districts. The values, relative to an index value of 1.00, reflect the relative commitment of public and private land managers to a particular land use. The data shows that in the Kiowa-Rita Blanca, FS land managers give strong emphasis to evergreen forest (predominately in Mills Canyon), shrubland and herbaceous grasses, while private land managers are more strongly committed to developed agricultural uses. Similar patterns are evident in the Black Kettle. Open water, forests and shrublands are given emphasis on -managed lands, reflecting the public commitment to recreation and ecological diversity. Conversely, economically useful purposes such as grasses, pasture and crops are relatively more common on private land.

Table 4.3: Public and Private Land Use in the National Grassland

	Kiowa-Rita Blanca NG		Black Kettle-Lake		Cibola NGs TOTAL	
	NFS	Private	NFS	Private	NFS	Private
Total (acres)	26.4%	73.6%	13.2%	86.8%	23.6%	76.4%
Open Water	1.18	0.93	2.10	0.83	1.18	0.94
Low Intensity Residential	-	1.36	-	1.15	-	-
High Intensity Residential	-	-	-	1.15	-	-
Commercial/Industrial/Transportation	0.21	1.28	0.35	1.10	0.22	1.24
Urban/Recreational/Grasses	-	1.36	-	-	-	-
Bare Rock/Sand/Clay	0.11	1.32	0.62	1.06	0.23	1.24
Quarries/Strip Mines/Gravel Pits	-	1.36	-	-	-	1.31
Deciduous Forest	-	1.36	1.94	0.86	0.75	1.08
Evergreen Forest	2.13	0.59	1.87	0.87	2.10	0.66
Mixed Forest	-	-	1.95	0.86	1.09	0.97
Shrubland	1.87	0.69	1.83	0.87	1.33	0.90
Grasslands Herbaceous	1.26	0.91	0.88	1.02	1.23	0.93
Pasture/Hay	0.08	1.33	0.11	1.14	0.09	1.28
Row Crops	0.09	1.33	0.04	1.15	0.09	1.28
Small Grains	0.06	1.34	0.10	1.14	0.07	1.29
Fallow	0.17	1.30	-	-	0.19	1.25
Woody Wetlands	-	-	7.55	-	4.24	-
Emergent Herbaceous Wetlands	-	-	2.80	0.73	1.57	0.82

Source: USGS EROS, National Land Cover Data (NLCD), Dates 09/10/2000 (New Mexico), 09/14/2000 (Oklahoma), 09/26/2000 (Texas). Calculations by UNM-BBER.

4.2 Land Conveyances and Exchanges

There have been only two land exchanges in the National Grasslands in at least 15 years, despite an obvious need for the FS to consolidate its fragmented land holdings and an apparent interest among private landowners to engage in land exchanges. According to regional FS officials, the principal impediment to land exchanges is a lack of funds necessary to process exchange agreements.

The following land exchanges have been identified that have occurred in the National Grasslands since 1992. The exchanges are organization by administrative district.⁵

Kiowa-Rita Blanca Ranger District:

- April 1994. 640 acres from FS allotments 95 and 145 were conveyed to Zero Enterprises Inc. in exchange for 640 acres just north of those units. This exchange helped consolidate National Grassland properties in that area, which lies just NW of Stratford TX, 9 miles. south of Kerrik TX on Hwy 807.
- September 2004. 220 acres conveyed to Aduddell Land and Cattle Trust from grassland allotment 99 in exchange for 220 acres of land that was intermingled in unit 81. The purpose was to help consolidate National Grassland properties in that area, which lies just west of Stratford TX.

⁵ Information on land conveyances and exchanges was provided by the Cibola National Forest Supervisors Office.

Black Kettle Ranger District:

- August 1992. 14 acres sold through Sisk Act (Exchange with Public Schools Act) to Town of Cheyenne, in Roger Mills County, Oklahoma, for a construction of a school. Land location: T13N, R23W, Sec 17 (W1/2E1/2). The land had been under a special use permit since 1973 to Town of Cheyenne for a town park (baseball field) and maintenance yard. It was sold to the Town of Cheyenne for appraised value of \$1500. Funds were deposited for future acquisition of land for the National Grasslands, which meet the intent of the Bankhead-Jones Farm Tenant Act, although no additional land was purchased from that fund.

5 - Grassland Users and Uses

5.1 Primary Uses

Ranching, oil & gas and hunting are principal activities on the National Grasslands. These activities generate the vast share of fiscal revenues and form a central part of the region's identity and culture. However, the sustainability of these activities depends in large part on market conditions that are beyond the control of the Forest Service and regional actors.

Ranching

Table 5.1 provides a summary of INFRA grazing data on the National Grasslands for the period March 1, 2003 – February 29, 2004.

Ranching is the most prevalent activity on the National Grasslands. In 2004, more than 250,000 of the nearly 260,000 acres of the National Grasslands were allocated to 177 permittees for ranching operations. With the exception of a few allotments set aside for administration and research, Mills Canyon in the KRBNG and McClellan Creek in the BKMCNG are the only sizable areas of the grasslands without active grazing. Various factors promote a close relationship between grazing permittees and the Grasslands and ensure continuity in the use the land by ranchers. First, permittees commonly integrate the use of public and private lands in an overall effort to establish scale and reduce costs in order to maintain the profitability of their operations. For many users, this requires an investment of time and money. Second, a 'conservation' cost sharing arrangement between the Forest Service and ranching permittees encourages users to make investments and adopt practices that yield long term benefits. Third, most permittees use the public land over a long period of time, as nearly all hold term allotments of 10 years with regular permit renewals. Fourth, because permits are consistently transferred with the sale of a ranching operation, permits constitute substantial equity for ranchers⁶. Described as 'permit value' in the literature, this equity can double the market value of a ranching operation, and often is used by many permittees as collateral for bank loans.⁷ Finally, most ranching permittees are local. According to 2004 INFRA grazing permit data, all but eight of the 177 users have business addresses within 30 miles of grassland boundaries.

⁶ Barnes 1913; Gee et al. 1992; Iqbal 1993; Torell and Kincaid 1996

⁷ Stern 1998.

Table 5.1: Selected Measures of Grazing Activities on the National Grasslands

3/1/04-3/1/05	Mills	Kiowa (remainder)	Rita Blanca	Black Kettle	TOTAL
Permittees ¹	29	37	56	60	177
Active Allotments (#)	70	92	139	118	419
Total Area (acres)	81,802	58,004	92,774	26,839	259,419
Area, Active Allotments (acres)	81,692	57,165	86,774	24,589	250,220
Permit Fees (\$)	\$25,162	\$31,806	\$53,046	\$16,463	\$126,478
Actual Use Fees (\$) ²	\$17,660	\$26,282	\$43,775	\$15,700	\$103,417
Actual Use Fee Credits (%)	30%	17%	17%	5%	18%
Actual Use Permit Fees per Acre (\$/acre)	\$0.22	\$0.46	\$0.50	\$0.64	\$0.51
Conservation Improvement credits (\$) ³	\$7,666	\$27,297	\$37,637	\$2,685	\$75,285
Conservation Improvement credits per acre (\$)	\$0.09	\$0.47	\$0.41	\$0.10	\$0.29
Animal Unit Months (AUMs)	16,784	21,730	35,631	10,915	85,060
Stocking Rate (head/acres) ⁴	1:58	1:32	1:29	1:27	1:35

Notes:

¹ The Kiowa has a total of 61 permittees; the sum of the number of permittees for Mills and Kiowa (remainder) is greater because the five permittees with allotments on units.

² Actual Use Fee are permit fees minus Actual Use Credits returned to the Permittee according to NFS discretion, typically associated with grazing conditions.

³ Conservation credits are fees credited to the Permittee in exchange for improvements to the allotment; credits are equivalent to 50% of the cost of improvements.

⁴ Stocking rate is the average number of acres per head; i.e. AUMs/12/acre.

Source: NFS INFRA Grazing database.

Hunting & Fishing

Hunting and fishing engages the greatest number of users on the National Grasslands, though their activities are more limited than ranching in terms of seasonality and locations. Game includes deer, pronghorn antelope, bear, cougar, turkey, quail and other small game in the Mills Canyon area; antelope, turkey and quail on the prairies of Kiowa-Rita Blanca; and turkey (including the prized Rio Grande turkey), quail, deer, dove, waterfowl on the Black Kettle. Hunting season for most large game are during the autumn months of September, October and November; in New Mexico, hunting season for antelope is during August. Fishing at the Black Kettle actively uses five lakes, stocked by Oklahoma Game and Fish, and numerous ponds. Fishing species include largemouth bass, catfish and sunfish.

By Federal law, hunting is regulated by the states, which are responsible for the issue of permits and licenses. Table A.3 in the Appendices provides a summary of hunting regulations for the three states as they apply to the assessment area. For most game in New Mexico, Oklahoma and Texas, 'authorizations' are also granted to private landowners; authorizations then can be sold to the general public. In New Mexico, permits for deer, elk and antelope are issued by lottery to State residents, non-residents

and hunting guides. In Oklahoma and Texas, a lottery system is in place for antelope, but for all other game, licenses are issued over the counter⁸.

Information on hunting activities is scarce and sometimes contradictory. A survey of sporting goods stores, private landowners, and hunting guides suggest that out-of-area hunters are relatively more likely than local residents to purchase authorizations to hunt 'high quality game' (e.g. antelope, elk, Rio Grande turkey) on private land, where activity is limited and the success rate is high, while local hunters are more likely to pursue larger game on public grasslands and, with the consent of landowners, small game on private land. By contrast, FS personnel argue that out-of-area hunters make extensive use of public lands, particularly for deer during the fall and turkey during the spring. By this account, the Black Kettle attracts as many as one deer hunter for each 50 acres of public land, half from out-of-state, with a total harvest in excess of 300 deer. During the spring turkey season, the Black Kettle district attracts as many as 3,000 hunters from across the nation. Although limited in number, antelope hunting attracts the greatest interest among hunters on the National Grasslands. In 2004, 2,754 applications were submitted for six permits for antelope hunting on the Rita Blanca National Grasslands in Dallam County, Texas.

An unregulated but significant subcategory of hunters on the Cibola grasslands is black tail prairie dog shooters. The activity has a large following across the Plains states, and historically many have traveled to the Kiowa/Rita Blanca because of the concentration of 'dog towns'. However, during recent years, sylvatic plague (*yersinia pestis*) has begun to severely reduce the number of active towns in the region, particularly in Dallam County. At present, there is an estimated 6,300 acres of prairie dog towns on Kiowa-Rita Blanca. The declining population of prairie dogs is seen, among many, to have led to a decline in the number of shooting enthusiasts.

Oil & Gas

Table 5.2 provides selected measures of oil & gas activities on the Black Kettle for 2001.

In contrast to widespread ranching and hunting activities, oil & gas extraction is confined to the approximately 32,000 acres of the Black Kettle and the McClellan Creek units. In 2001, 36 wells were active across the Black Kettle, producing 2.91 billion cubic feet of gas and 13,493 barrels of oil; on the smaller McClellan Creek unit, 13 wells produced 5,931 barrels of oil. There is also one active oil-gas lease on the Black Kettle.

Table 5.2: Oil & Gas Activity on The Black Kettle National Grassland, 2001

	Gas (1,000s cf)	Oil (barrels)	Wells
Production, 2001			
Black Kettle, OK	2,868,760	13,493	34
Lake Marvin TX	43,922	-	2
Lake McClellan TX	-	5,931	13
TOTAL	2,912,682	19,424	49
Prices, 2001	Gas (1,000s cf)	Oil (barrels)	
	\$4.09	\$25.96	
Total Value of Production, 2001			
Black Kettle & Lake McClellan	\$12,417,205		
Distribution of Royalties, 2001			
12.5% Royalty	\$1,552,151		
25% to Counties	\$388,038		
25% to State of Oklahoma	\$388,038		
50% to US Treasury	\$776,075		
Distribution within Roger Mills County:			
Royalties used for Schools (67%)	\$259,985		
Royalties used for Roads (33%)	\$128,052		

Source: NFS Black Kettle District office; Roger Mills County government.

Recreationists, including bird-watchers, wildlife enthusiasts, hikers, campers, off-highway (OHV) vehicle riders and those holding social functions, including picnics, also make extensive use of the National Grasslands. Visitor use survey data (NVUM) is too limited to allow for statistical analysis⁹, but combined with observations by Forest Service personnel it is possible to describe these uses in general terms.

On developed sites, especially picnic areas and campgrounds, social functions are perhaps most common, with picnics identified as the principal activity by the greatest number of visitors surveyed at the Black Kettle. These visitors include in almost equal proportion persons who live close to the grasslands (within 30 miles) and persons who live far from the grasslands (more than 60 miles), presumably persons traveling on Interstate 40. Visitors often state an interest in 'viewing nature' on their trips to the National Grasslands, though this is less often identified as a principal purpose for visit.

Of those responding to the Black Kettle NVUM survey, several expressed an interest in camping and significantly, these individuals were by large proportion from areas more than 60 miles from the grasslands. It is not possible to determine from these surveys whether the grasslands were a principal destination for these campers, a site for camping for persons traveling on I-40, or whether camping was combined with another primary activity, such as hunting. Surveys were not conducted at Mills Canyon, but Forest Service personnel and a visit to the Mills Canyon campground suggests that this area is also a preferred site for camping.

Hiking is infrequently identified in the Black Kettle NVUM survey as a primary activity, though many state that they do hike on their visits. It might be assumed that hikers are engaged in related primary activities, such as hunting or wildlife viewing. Reflecting the

⁹ Only 241 NVUM surveys were conducted, and these were limited to a few sites on the Black Kettle, including the Black Kettle Campground and the Croton Wilderness Viewing Area, and only eight days, including Memorial Day and Labor Day.

overall results, hikers include in near equal proportion persons who live within 30 miles or more than 250 miles from the grasslands, but relatively few in an intermediate range.

Again, because of sampling concerns and without a standardized practice of fee collection, it isn't possible to draw significant conclusions regarding the seasonal pattern of visitation. However, by most accounts autumn has a high level of activity. Seasonal hunting activity is largely concentrated during autumn months, and draws a large number of visitors to all parts of the National Grasslands. Similarly, the Fall Foliage Festival during October at Lake Marvin of the Black Kettle Grasslands is said to draw up to 7,500 persons over a single weekend. During the summer months, Memorial Day, Fourth of July and Labor Day weekends attract a large number of persons to the Grasslands to camp, picnic, hike and view wildlife.

OHV (or all-terrain vehicle) driving is gaining in popularity throughout the United States, and is placing an increasing burden on the management of public lands. According to Forest Service personnel, OHV riding at the Kiowa/Rita Blanca Grasslands is largely concentrated at Mills Canyon, where uneven terrain – unusual in the region – provides excitement for riders. The Black Kettle District has established a network of trails at the McClellan Creek unit, creating a destination for OHV riders. The site has been identified by various website for OHV enthusiasts as a “prime riding area within the Texas Panhandle.”¹⁰

5.2 Special Uses Permittees

The forest service grants authorization for usage of the Grasslands through special use permits. The permits allow for occupancy, usage, rights to, or privileges on the grasslands. Although, the Forest Service grants special use permits in all of its forests, specific uses and trends for permit types are unique to individual forests.

As Table 5.2 shows, there have been relatively few active special use permits in the National Grasslands. Since 1949, only 149 permits have been granted in both ranger districts; the number has been offset by a closure of 48 permits. Black Kettle has seen the majority of the growth in permitted usage growing 162% since 1949, conversely Kiowa/Rita Blanca special use permits have increased by only 30% with a 14-year period (1986-2000) with only 14 permits issued. Table 5.3 shows that over half of the permits issued in Black Kettle are for oil and gas pipelines or sites, where as Kiowa Rita Blanca has high concentrations of permittees for power lines and road easements.

¹⁰ <http://www.rockymountainrec.com/recreation/ohv.htm> . Lake McClellan is also featured on the <http://www.trailsources.com> .

Table 5.2 Historical Trends in Recreation/Lands/Minerals Special Use Permits, 1949-2005

Date Issued	Black Kettle			Kiowa/Rita Blanca		
	# Issued	# Closed/Expired	# Active Permits	# Issued	#Closed/Expired	# Active Permits
1949-1985	23	2	21	42	1	41
1986-1990	21	12	30	10	11	49
1991-1995	16	6	40	1	0	50
1996-2000	12	5	47	3	5	46
2001-2005	13	5	55	8	1	53

Table 5.3 Percentage of Permits by Land Use Type from 2005 Active Permits

Land Use Permit Type	Kiowa/Rita Blanca	
	Black Kettle	Blanca
Oil-gas pipelines, sites	52%	9%
Powerlines	16%	26%
Road Easements	12%	34%
Water lines, facilities	9%	6%
Phone/Communications	2%	11%
Research	0%	6%
Other Uses	9%	8%

5.3 Illegal Uses

Tables 5.2 and 5.3 show illegal fines and warnings issued from illegal activities taking place on both National Grassland Ranger Districts. In Black Kettle, the most frequently occurring problem is related to illegal use of vehicles either by illegal usage, reckless activity, or incurring damage to the land. In the Kiowa/Rita Blanca Ranger District, the largest occurrence was violation 36CFR2619a, damaging any natural resource or other US property. In part, Black Kettle, through its creation of trails in the McClellan Creek Unit may alleviate some of the violations from OHV usage.

Table 5.2 Violations on the Black Kettle Ranger District

Violation Code	#Incidents1	Violation
Black Kettle Ranger District		
36CFR26152A	1	Building, maintaining, attending, or using a fire, campfire, or stove fire (fire)
36CFR2615D	1	Leaving a fire to escape from control (fire)
36CFR2619A	1	Damaging any natural feature or other property of the US (property)
36CFR26110M	1	Failing to stop a vehicle when directed to do so by a Forest Officer (occupancy and use)
36CFR26154A	3	Using any type of vehicle prohibited by an order (on NFS roads)
36CFR26158BB	1	Possessing a beverage (during occupancy) which is defined as an alcoholic beverage by State Law (occupancy and use)
36CFR26154A	1	Using any type of vehicle prohibited by an order (on NFS roads)
18USC641	1	Public money, property, or records: Whoever embezzles, steals, purloins, or knowingly converts to his use or the use of another, sells, conveys, or disposes of any record, voucher, money, or thing of value of the US or of any department or agency thereof...shall be fined or imprisoned...
36CFR26113G	4	Carelessly, recklessly, or without regard for the safety of any person... (use of vehicles off roads)
36CFR26113H	4	In a manner which damages or unreasonably disturbs the land, wildlife, or vegetative resources (use of vehicles off roads)
36CFR26113I	1	In violation of a State law established for vehicles used off roads (use of vehicles off roads)
36CFR26114B	1	Building, attending, maintaining, or using a fire outside of a fire ring provided by the FS for such purpose or outside of a stove, grill, or fireplace (at developed recreation sites)
36CFR26114D	2	Discharging or igniting a firecracker, rocket, or other firework or explosive (at developed recreation sites)
36CFR2615D	1	Leaving a fire to escape from control (fire)
36CFR2619A	1	Damaging any natural resource or other property of the US (property)
36CFR2619B	1	Removing any natural feature or other property of the US (property)

Table 5.3 Violations on the Kiowa/Rita Blanca Ranger District

Violation Code	#Incidents1	Violation
Kiowa/Rita Blanca Ranger District		
36CFR26111E	1	Dumping of any refuse, debris, trash, or litter brought as such from private property or from land occupied under permit, except where a container, dump, or similar facility has been provided and is identified as such, to receive trash generated from private lands or
18USC1361	1	Government property or contracts: Whoever willfully injures or commits any depredation against any property of the US or any department or agency thereof...shall be punished...
36CFR26110A	1	Constructing, placing, or maintaining any kind of road, trail, structure, fence, enclosure, communication equipment, or other improvement on NFS land or facilities without a special-use authorization, contract, or approved operating plan is prohibited (occupancy and use)
36CFR26111B	2	Possessing or leaving refuse, debris, or litter in an exposed or unsanitary condition is prohibited (sanitation)
36CFR26113G	1	Carelessly, recklessly, or without regard for the safety of any person... (use of vehicles off roads)
36CFR26153E	2	When provided in an order, it is prohibited to go into or be upon any area which is closed for the protection of public health or safety (special closures)
36CFR26154D	1	When provided by an order, operating a vehicle in violation of the speed, load, weight, height, length, width, or other limitations specified by the order is prohibited (on NFS roads)
36CFR26158A	1	When provided by and order, camping for a period longer than allowed by the order is prohibited (occupancy and use)
36CFR2615D	2	Leaving a fire to escape from control (fire)
36CFR2616A	1	Cutting or otherwise damaging any timber, tree, or other forest product, except as authorized by a special-use authorization, timber sale contract, or Federal law or regulation is prohibited (timber and other forest products)
36CFR2617A	2	Placing or allowing unauthorized livestock to enter or be in the National Forest System or other lands under FS control is prohibited (livestock)
36CFR2619A	5	Damaging any natural resource or other property of the US (property)
36CFR2619B	1	Removing any natural feature or other property of the US (property)
-?	3	

5.4 Issues for Managers and Planners

In general, there is limited competition and conflict among users for the resources of the National Grasslands. In the Black Kettle hunting, grazing and oil & gas extraction have functioned side by side for years, and together form a core part of the regional culture. Likewise, grazing and hunting have long been a part of ecological and cultural environment of the Kiowa-Rita Blanca, again with little conflict. At present, the greatest

potential for conflict, particularly near the Mills Canyons section of the Kiowa National Grassland, concerns OHV use. OHV use is subject to limited regulation, but can be disruptive for cattle ranchers, hunters, wildlife enthusiasts and others seeking solitude and silence. Another possible conflict concerns the interests of private landowners who, in many cases, control right-of-way access to public land on the National Grasslands. This was discussed in greater detail in the Access section of this report.